



Green Skills Research for Conservation:

A baseline study of the nature and scope of green skills for conserving South Africa's ecological assets.

Environmental Leaders Programme,
WWF-SA



Policy alignment

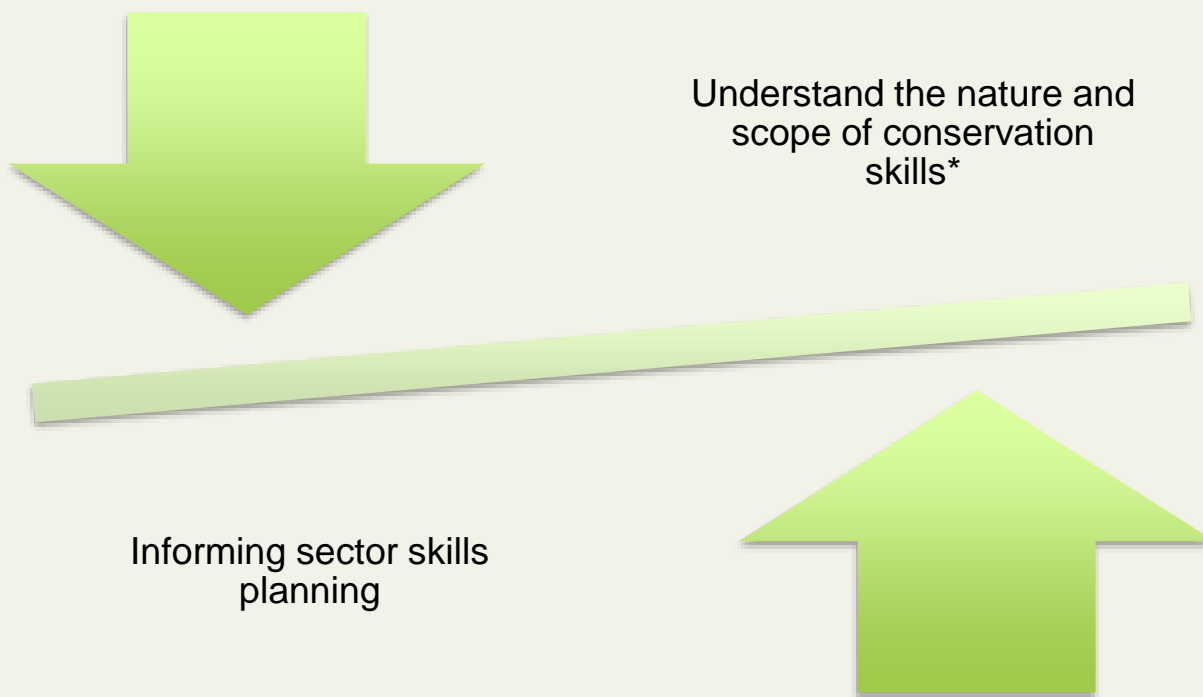
National
Biodiversity
Research and
Evidence Strategy

Capacity of skilled,
experienced and
appropriately qualified
scientists

Are the necessary skills
available in nature
conservation organisations



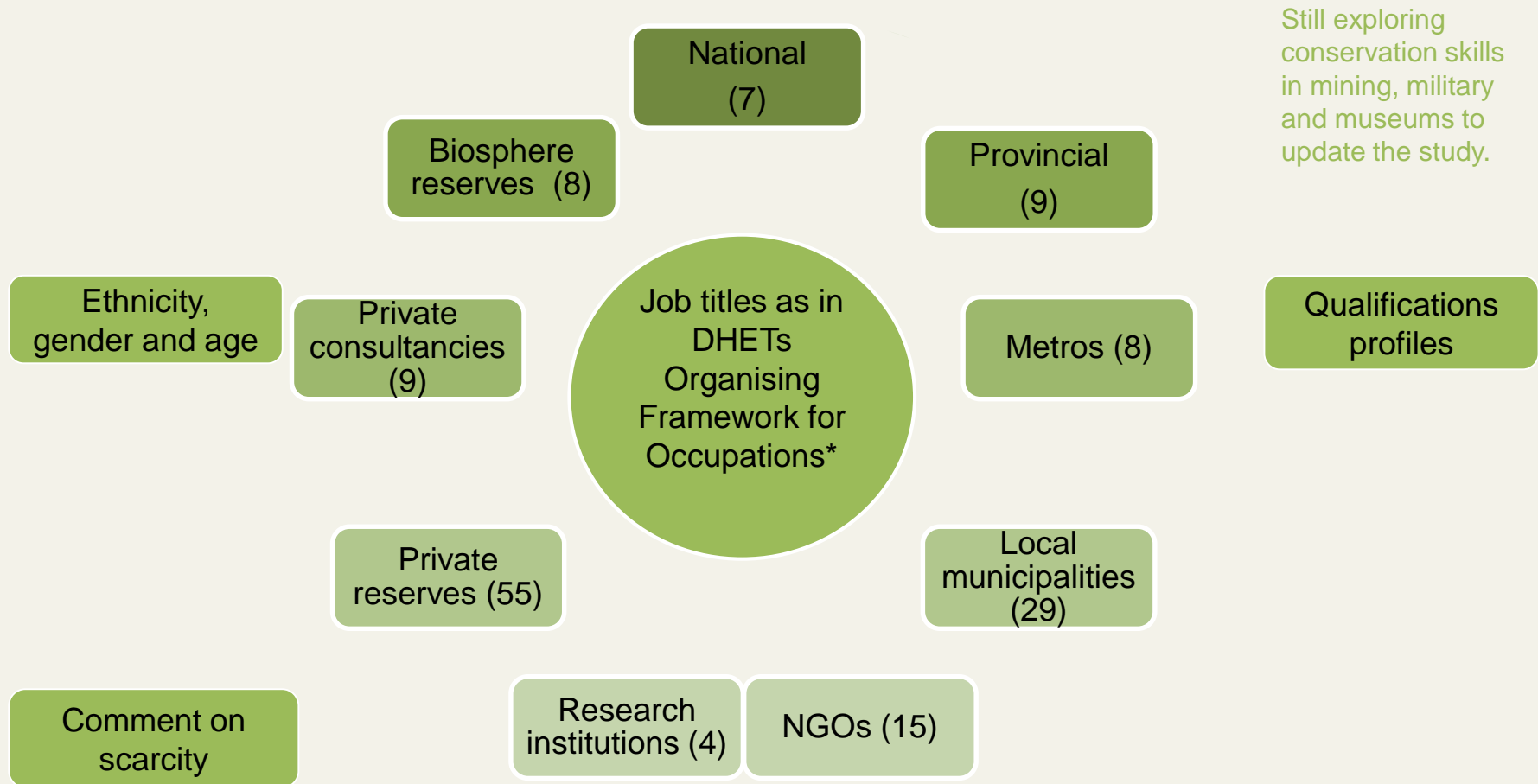
Context and purpose of the research



* Skills = professionals employed in conservation jobs



Research Methodology



* The Department of Higher Education and Training's Organising Framework for Occupations (OFO) provides a standardised framework for describing work based skills, referred to as occupations in this framework. All skills planning undertaken by SETAs and DHET, is framed within the OFO. This project similarly tried to align employee information of conservation professionals to this national system of skills planning.



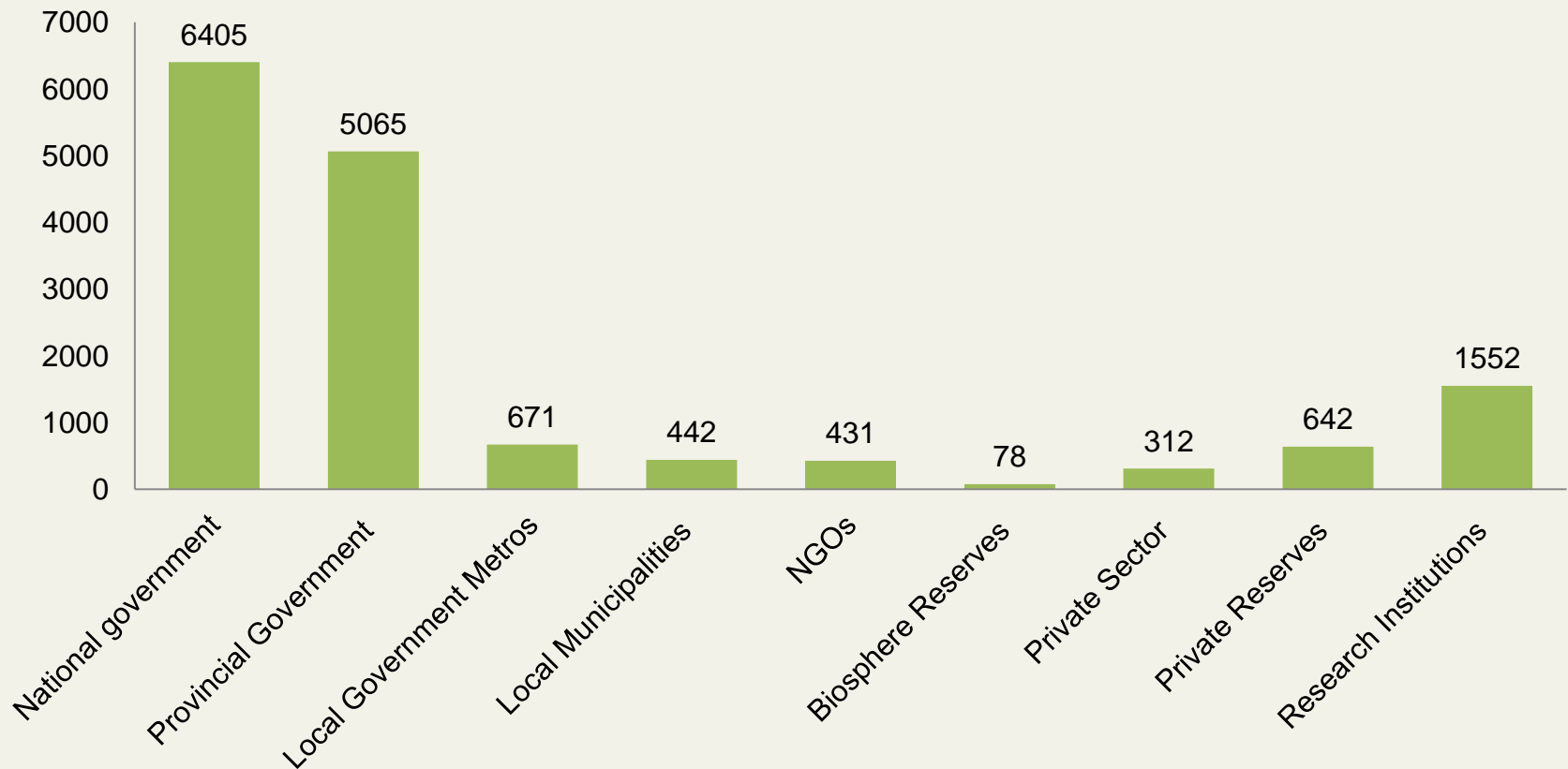
Total # of conservation skills, excluding EPWP*

Conservation skills per employer category	#	%
National Government	6,405	41.1%
Provincial Government	5,065	32.5%
Local Government Metros	671	4.3%
Local Municipalities	442	2.8%
NGOs	431	2.8%
Biosphere Reserves	78	0.5%
Private Sector	312	2.0%
Private Reserves	642	4.1%
Research Institutions	1,552	9.9%
Total	15, 092	100%

* EPWP – Expanded Public Works Programme



Total # of conservation skills, excluding EPWP





Total # of conservation skills, including EPWP

Conservation skills per employer category	#	%
National Government	99,779	57.7%
Provincial Government	22,187	12.8%
Local Government Metros	671	0.4%
Local Municipalities	47,128	27.3%
NGOs	431	0.2%
Biosphere Reserves	78	0.1%
Private Sector	312	0.2%
Private Reserves	642	0.4%
Research Institutions	1552	0.9%
Total	172,780	100.0%



Total # of conservation skills per OFO major group*, excluding EPWP

#	Total number of conservation skills per OFO major group	#	%
1	Managers	1084	7.2%
2	Professionals	5339	35.4%
3	Technicians and Associate Professionals	2913	19.3%
6	Skilled Agricultural, Forestry, Fishery, Craft And Related Trades Workers	554	3.7%
8	Elementary Occupations	5202	34.4%
	Total	15092	100.0%

* The is organised around 8 major groups, 5 of which applies to conservation, as above. These major groups are distinguished from each other according to the skill level of the occupation, the degree of specialisation and complexity for / of the occupation.



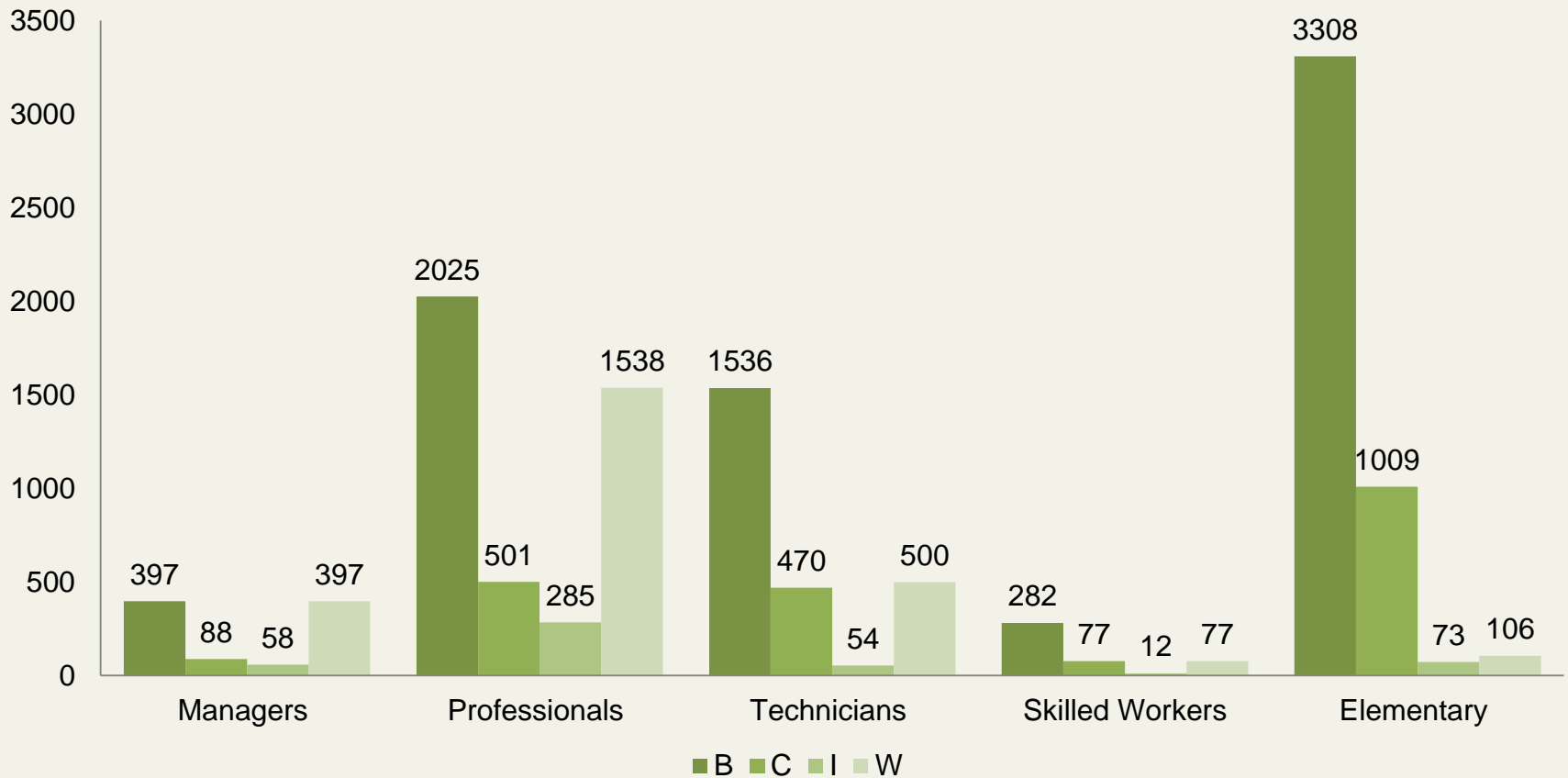
Ethnicity profile of conservation skills across organisations

Ethnicity across organisational categories	Black	Coloured	Indian	White
National Agencies	3515	976	161	918
Provincial Agencies	2431	682	75	352
Metros	240	55	11	167
Local Government	152	84	13	42
NGOs	193	60	15	158
Biosphere Reserves	7	10	1	49
Private Sector	137	33	26	104
Private Reserves	382	54	2	197
Research Institutions	558	142	174	605
Subtotal	7615* (59.6%)	2096* (16.4%)	478* (3.7%)	2592* (20.3%)
EPWP Workers	103058	53689	8	0
Total	110673 (65.4%)	55785 (32.8 %)	486 (0.3%)	2592 (1.5%)

* Ethnicity totals does not reflect the overall total of conservation skills (i.e.. 15092), because in some cases this information was not disclosed . Figures above therefore reflect only those totals where ethnic differentiation was specified

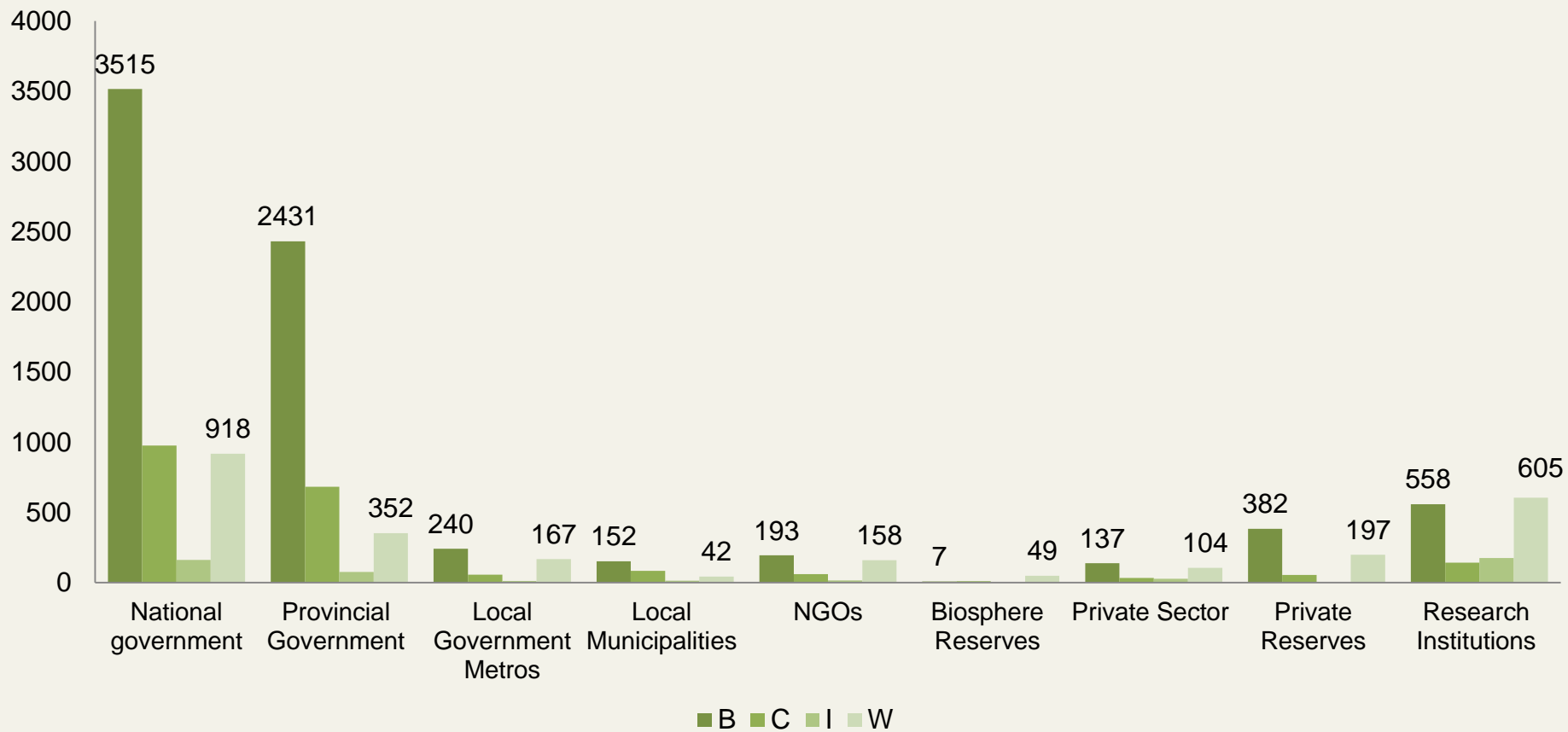


Ethnicity profile per OFO major group





Ethnicity profile per organisational category





Gender Profile per major group, excluding EPWP





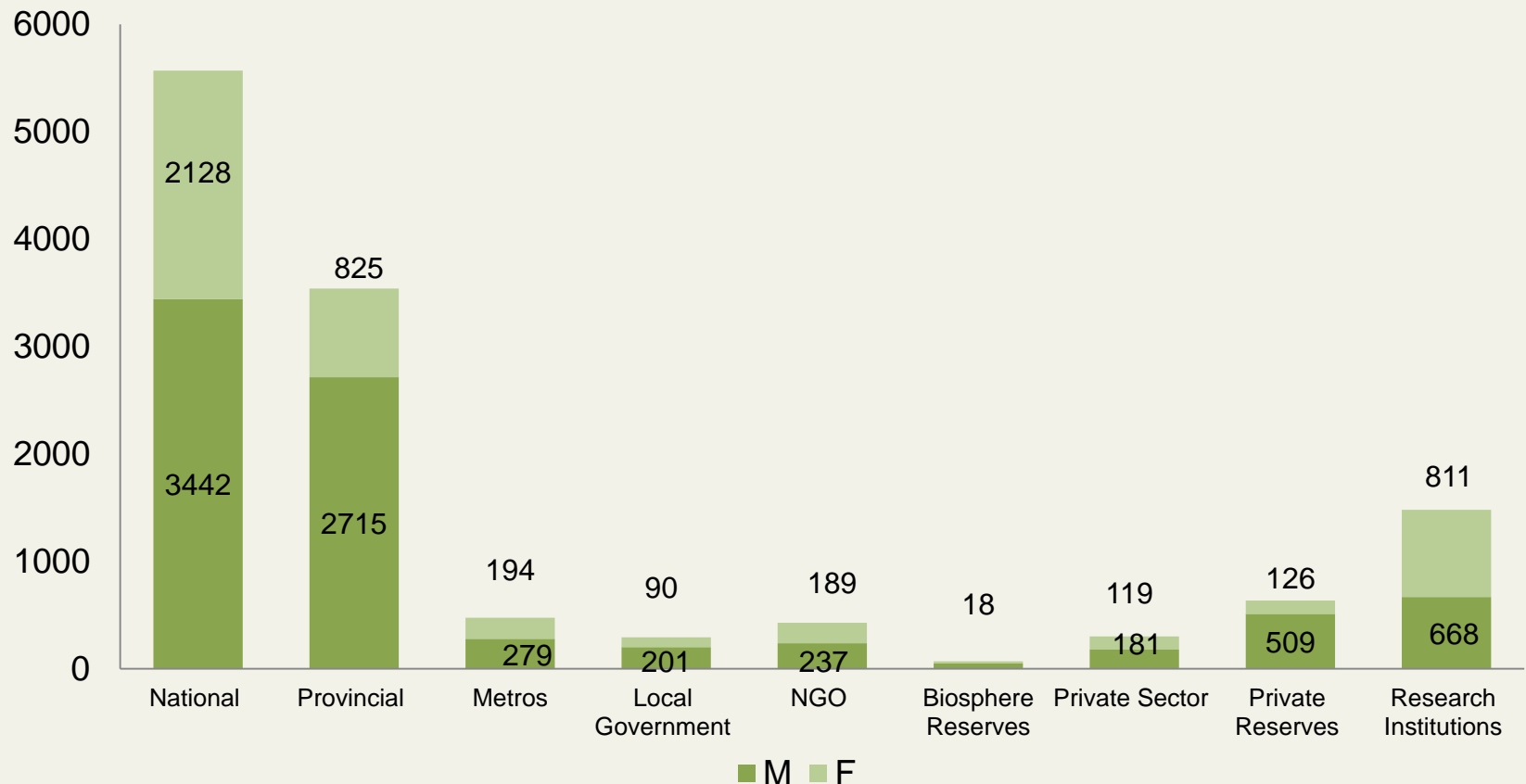
Gender profile per organisational category

Gender profile per organisation category	Total # of Males	Total # of Females
National Agencies	3442	2128
Provincial Agencies	2715	825
Metros	279	194
Local Government	201	90
NGOs	237	189
Biosphere Reserves	49	18
Private Sector	119	181
Private Reserves	635	509
Research Institutions	668	811
Subtotal	8345 (62.8%)	4945 (37.2%)
EPWP Workers	65831	90908
Total	74176 (43.6%)	95853 (56.4%)

* Gender totals does not reflect the overall total of conservation skills (i.e. 15092), as some organisational totals were not disaggregated for gender. This total only reflects the data that was disaggregated.



Gender profile per organisational category, excluding EPWP





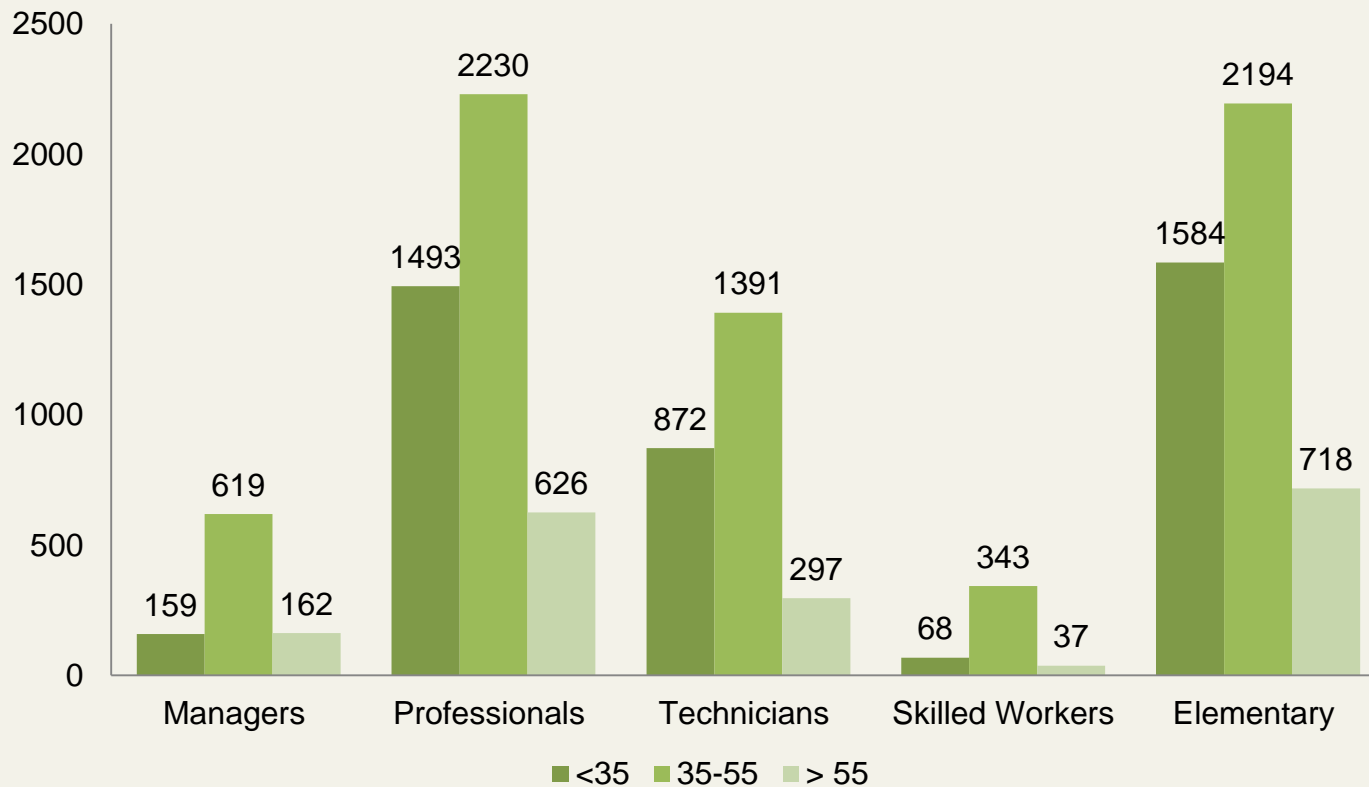
Age distribution for conservation skills

Age profiles across organisational categories	Younger than 35	35 to 54	Older than 54
National Agencies	921	530	388
Provincial Agencies	398	1321	22
Metros	148	260	65
Local Government	54	90	40
NGOs	189	185	52
Biosphere Reserves	6	37	24
Private Sector	145	137	18
Private Reserve	208	322	105
Research Institute	522	774	183
Subtotal	2591* (36.3%)	3656* (51.2 %)	897* (12.6%)
EPWP Workers	94062	67386	943
Total	96653 (57.0%)	71042 (41.9%)	1840 (1.1%)

* Age distribution totals does not reflect the overall total of conservation skills (i.e. 15092) due to undisclosed information from some organisations



Age distribution of conservation skills per OFO major group





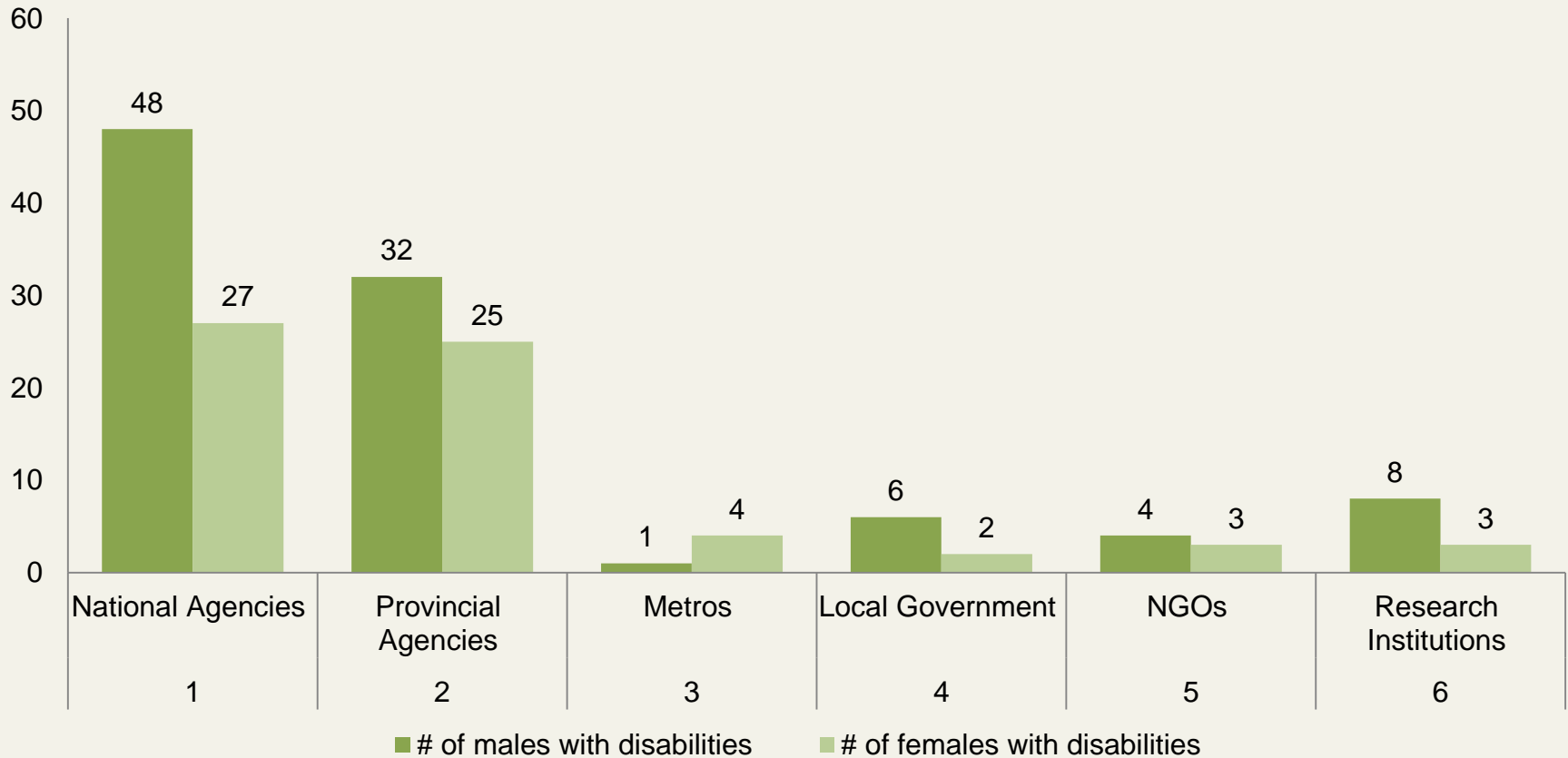
Persons with disabilities

Persons with disabilities across organisation categories	Total # of males with disabilities	Total # of females with disabilities	Total # of persons with disabilities
National Agencies	48	27	75
Provincial Agencies	32	25	57
Metros	1	4	5
Local Government	6	2	8
NGOs	4	3	7
Research Institutions	8	3	11
Total	98	65	163
% of disabled people to the total # of skills	0.1%	0.0%	0.2%
National Average	6.5%	8.3%	7.5%

*Disability figures could be underrepresented in the sample as employees often do not disclose their disabilities

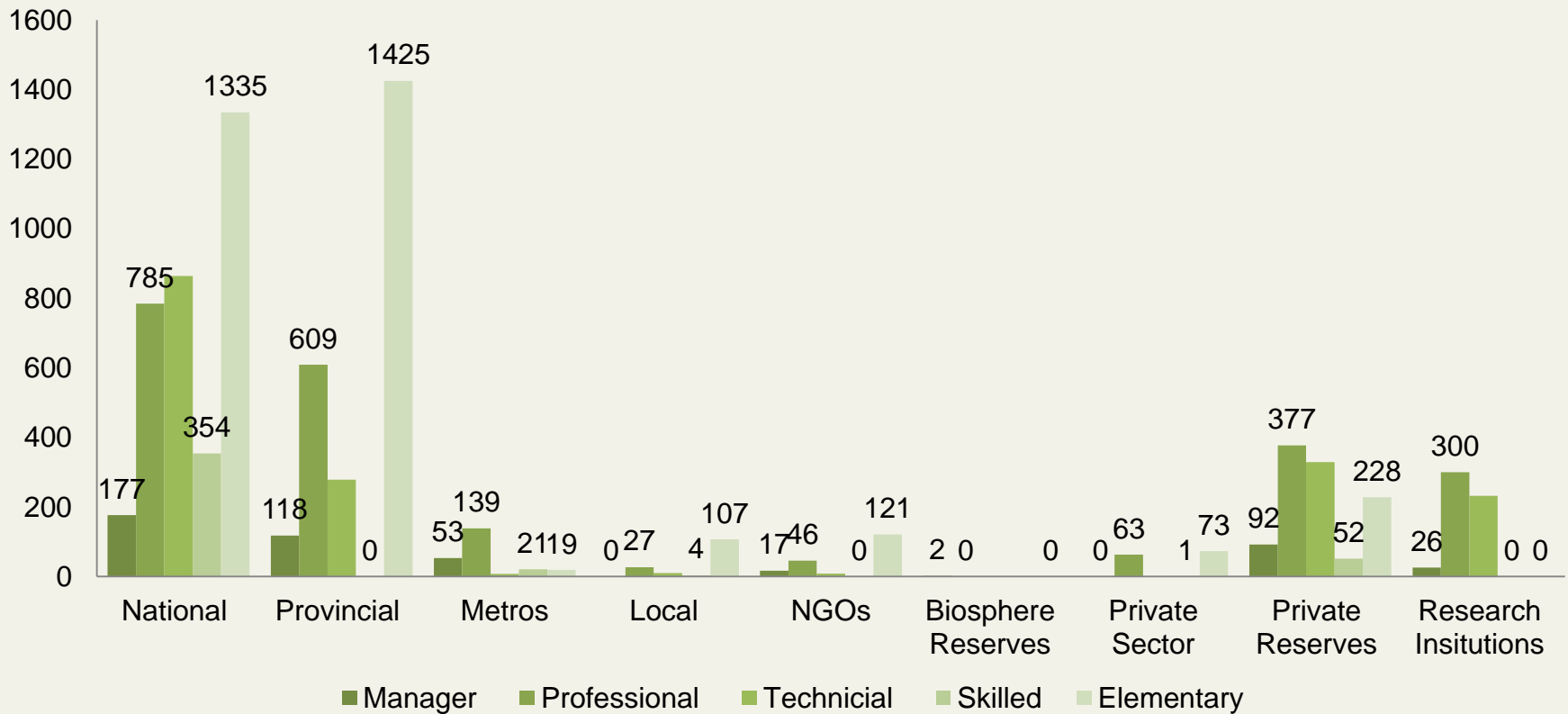


Persons with disabilities



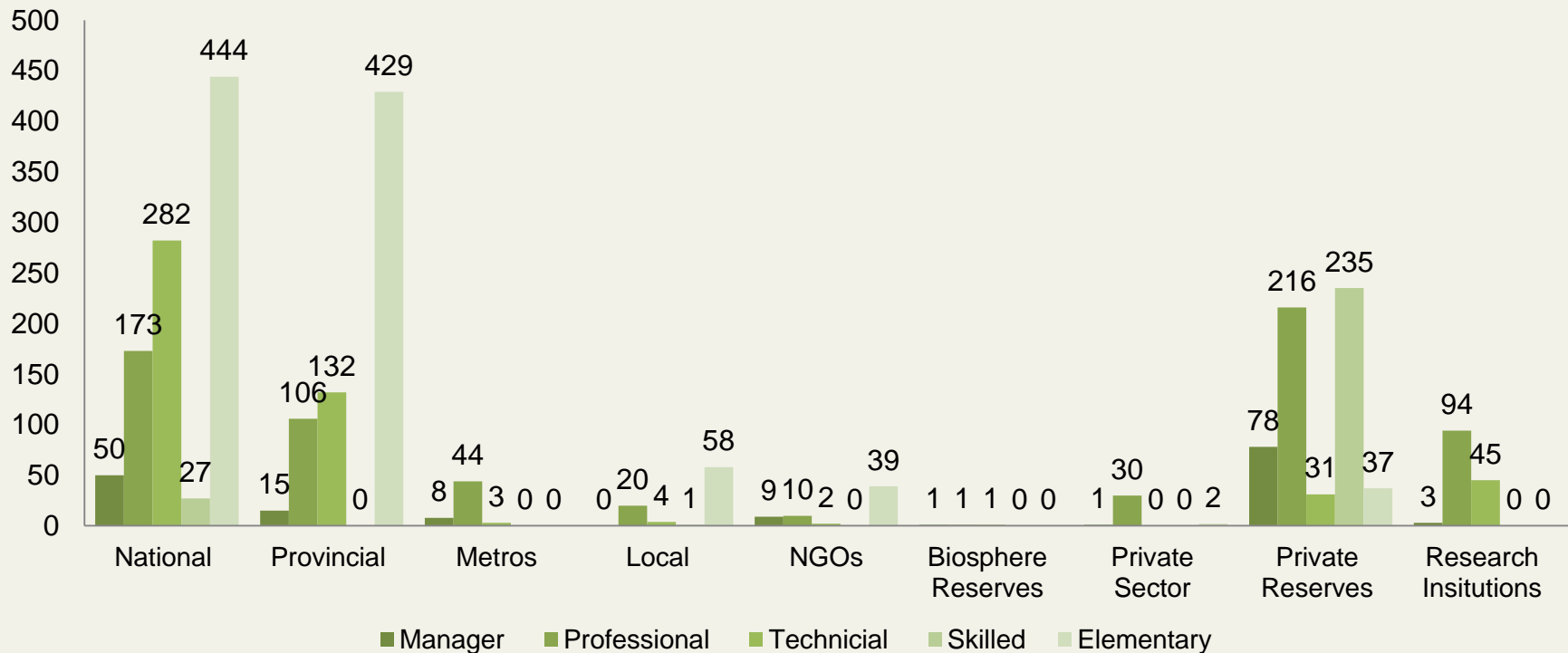


Black employees disaggregated by organisation category & major group



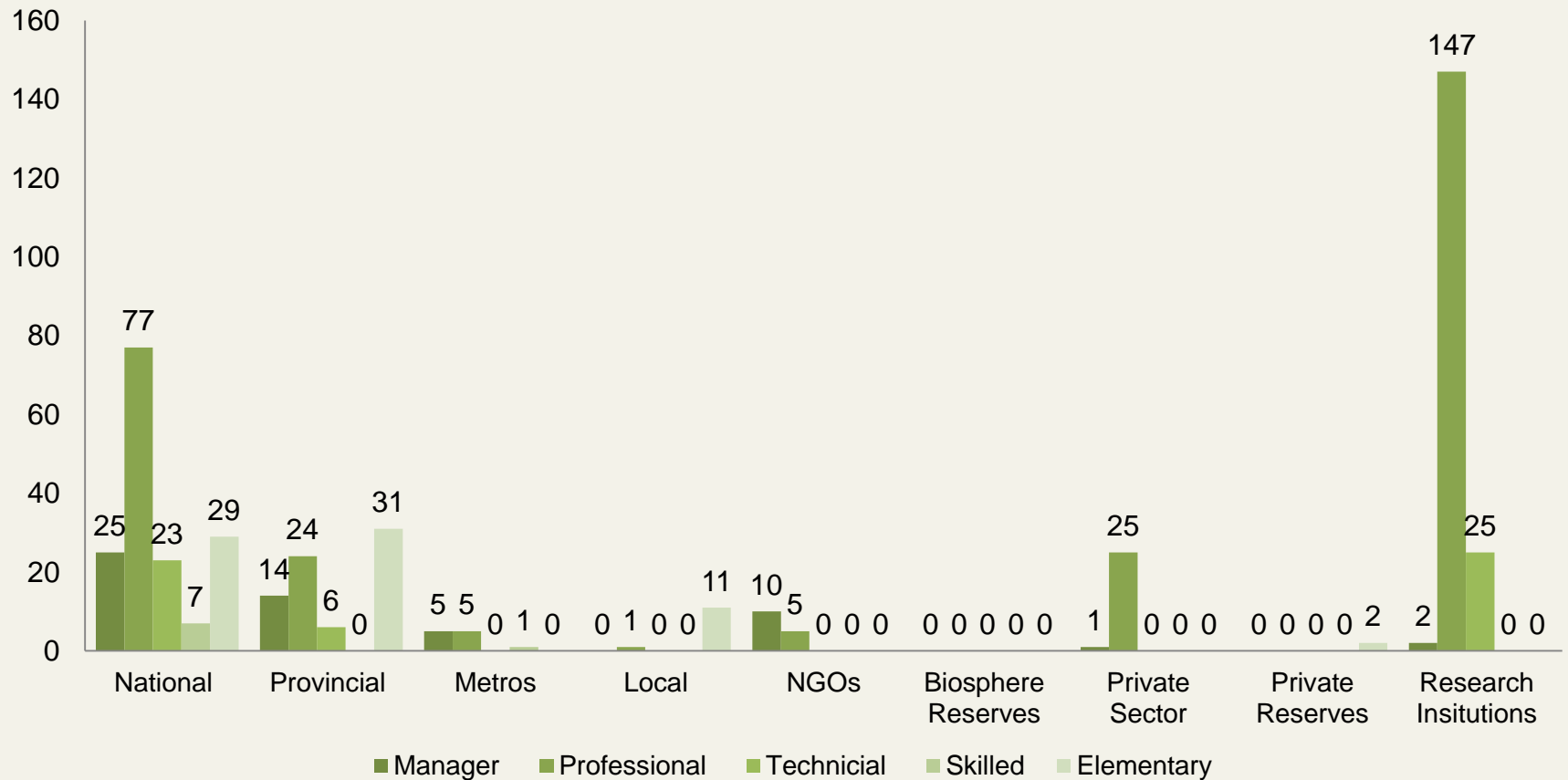


Coloured employees disaggregated by organisation category & major group



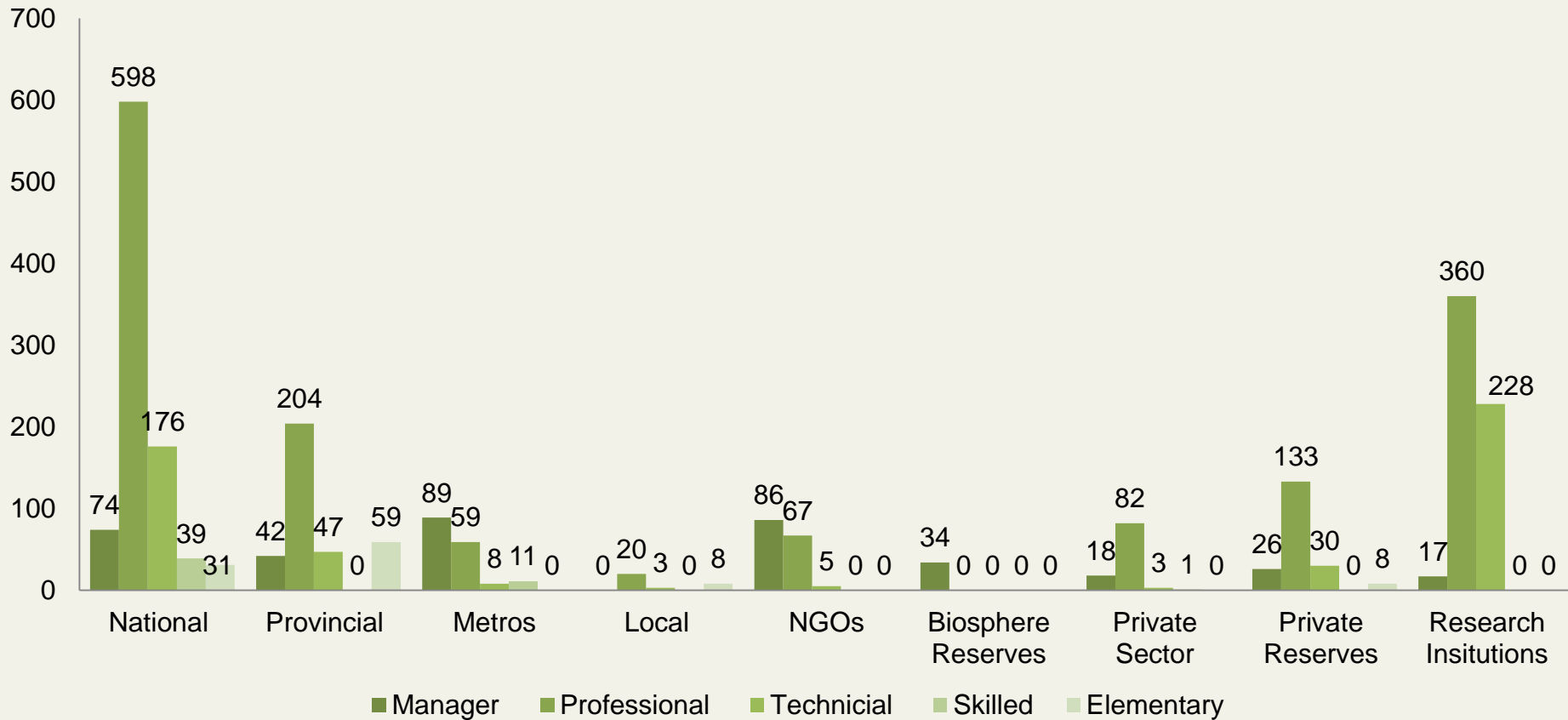


Indian employees disaggregated by organisation category & major group



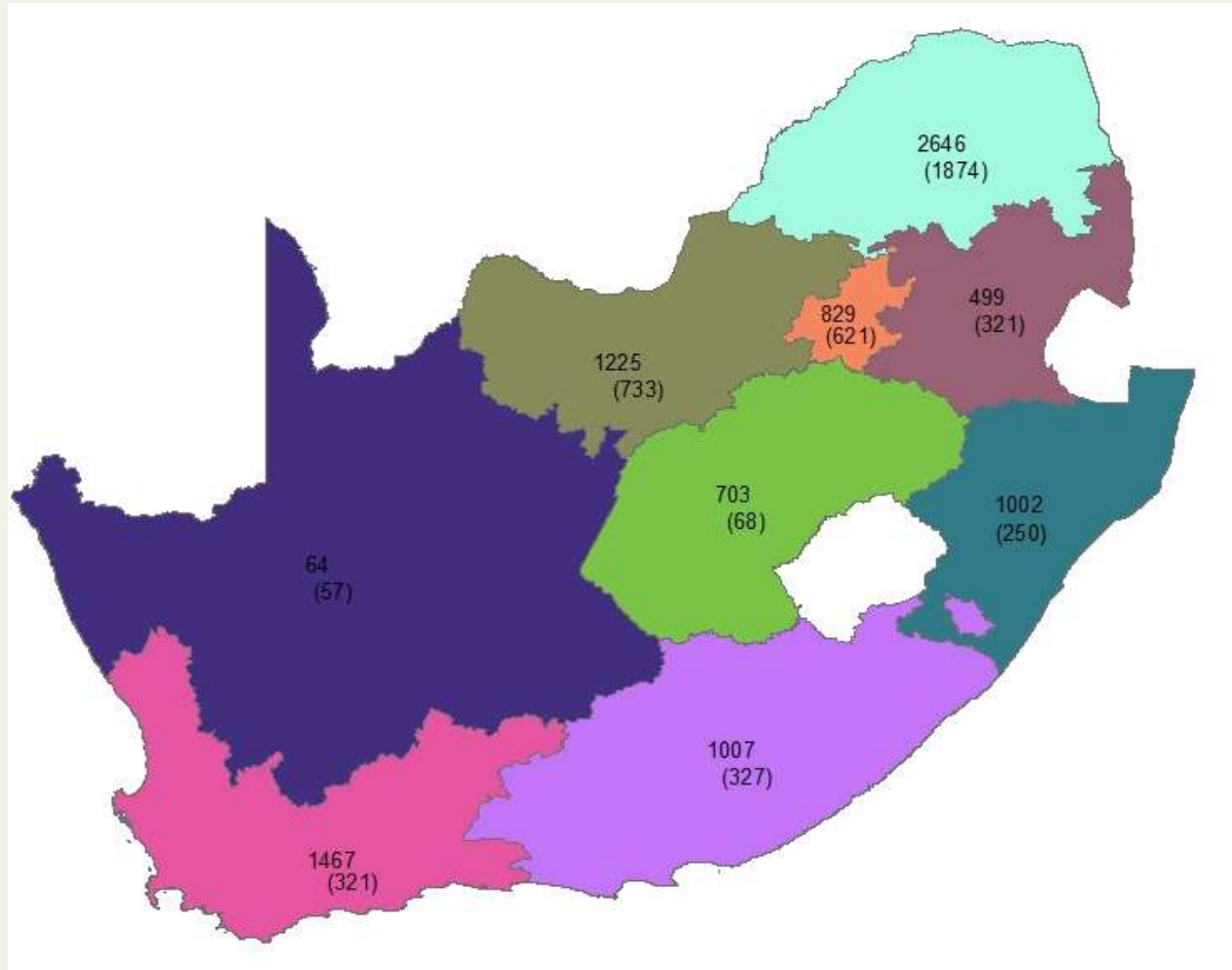


White employees disaggregated by organisation category & major group





Geographical spread of skills



Vacancies are reflected in brackets



List of scarce skills

Scarce occupation	Vacancies over 50	Organisations comment on degree of scarcity	% number of vacancies relative to total number of skills
Field Ranger	1051		23%
Taxonomist*	127	Young people do not go into the field of taxonomy	22%
Life Science Technician	51	People with first degrees or national diplomas are in abundance, however the Marine Technician specialism is scarce.	7%
GIS Specialist	44	There are people in conservation organisations with GIS skills but few has a specialised GIS designation.	25%
Park Ranger	72	The occupation requires certain years of experience in addition to a Nature Conservation qualification	27%
Environmental Officer	173		38%
Species Protection Officer	65		38%
Community Worker	973		20%
Conservation Scientist	141		42%
Environmental Manager	20	This is a fairly new career, often branches from different learning pathways	19%
Policy and Planning Manager	8		17%

* data obtained from SANBI Strategy for Plant & Zoological Taxonomy 2013-2020



Cont. List of scarce skills

Scarce occupation	Vacancies over 50	Organisations comment on degree of scarcity	% number of vacancies relative to total number of skills
Botanist	6	SANBI reported a scarcity in Botany	16%
Marine Biologist	2	Bursaries are offered at post graduate level to develop the skills. Conservation organisations struggle to attract Black capacity. Marine field is predominantly white/male field.	11%
Zoologist	8	Specialist are difficult to find e.g. Entomologist, small mammal and Large mammal specialist	38%
Ecologist	15	One Reserve Ecologist usually works between several reserves, therefore they are often overwhelmed. The Ichthyologist is a particularly scarce skill, specialising in freshwater ecosystems. A mentoring succession plan is required to ensure development of the skill.	20%
Environmental Practices Inspector	4	Very scarce especially in rural provinces where it is difficult to attract and retain this skill.	67%
Urban and Regional Planner	14		30%
Research Manager / Research Director	5	It takes a long time to fill this position. As a result the position is dissolved leaving research unstructured. Often the research portfolio is shared amongst other responsibilities.	17%



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